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CLMPTO 09/2/04 JW

Cancel Claims 1-12

Add New Claims 13-18

13. A signal receiving apparatus capable of receiving a VSB modulated signal processed by digital modulation and a OAM modulated signal processed by digital modulation, which are a terrestrial broadcasting signal and a cable television signal, respectively, said signal receiving apparatus comprising:

a mixer operable to convert the VSB modulated signal to a low frequency signal of the VSB modulated signal, and operable to convert the OAM modulated signal to a low frequency signal of the OAM modulated signal:

a OAM demodulator operable to demodulate the low frequency signal of the OAM modulated signal to a OAM demodulated signal; and

a VSB demodulator operable to demodulate the low frequency signal of the VSB modulated signal to a VSB demodulated signal.

## 14. A signal receiving method comprising:

receiving a signal with a receiver capable of receiving a VSB modulated signal processed by digital modulation and a QAM modulated signal processed by digital modulation, which are a terrestrial broadcasting signal and a cable television signal, respectively;

converting the VSB modulated signal to a low frequency signal of the VSB modulated signal with a mixer if the received signal is the VSB modulated signal, and demodulating the low frequency signal of the VSB modulated signal to a VSB demodulated signal; and

converting the QAM modulated signal to a low frequency signal of the OAM modulated signal with the mixer if the received signal is the QAM modulated signal, and demodulating the low frequency signal of the OAM modulated signal to a OAM demodulated signal:

wherein the mixer is capable of converting the VSB modulated signal to the low frequency signal of the VSB modulated signal and converting the OAM modulated signal to the low frequency signal of the OAM modulated signal.

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15. A signal receiving apparatus capable of receiving a VSB modulated signal processed by digital modulation and a PSK modulated signal processed by digital modulation, which are a terrestrial broadcasting signal and a satellite broadcasting signal, respectively, said signal receiving apparatus comprising:

a mixer operable to convert the VSB modulated signal to a low frequency signal of the VSB modulated signal, and operable to convert the PSK modulated signal to a low frequency signal of the PSK modulated signal;

a PSK demodulator operable to demodulate the low frequency signal of the PSK modulated signal to a PSK demodulated signal; and

a VSB demodulator operable to demodulate the low frequency signal of the VSB modulated signal to a VSB demodulated signal.

16. A signal receiving method comprising:

receiving a signal with a receiver capable of receiving a VSB modulated signal processed by digital modulation and a PSK modulated signal processed by digital modulation, which are a terrestrial broadcasting signal and a satellite broadcasting signal, respectively;

converting the VSB modulated signal to a low frequency signal of the VSB modulated signal with a mixer if the received signal is the VSB modulated signal, and demodulating the low frequency signal of the VSB modulated signal to a VSB demodulated signal; and

converting the PSK modulated signal to a low frequency signal of the PSK modulated signal with the mixer if the received signal is the PSK modulated signal, and demodulating the low frequency signal of the PSK modulated signal to a PSK demodulated signal;

wherein the mixer is capable of converting the VSB modulated signal to the low frequency signal of the VSB modulated signal, and converting the PSK modulated signal to the low frequency signal of the PSK modulated signal.

17. A signal receiving apparatus capable of receiving a PSK modulated signal processed by digital modulation and a OAM modulated signal processed by digital modulation, which are a

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satellite broadcasting signal and a cable television signal respectively, said signal receiving apparatus comprising:

a mixer operable to convert the PSK modulated signal to a low frequency signal of the PSK modulated signal, and operable to convert the OAM modulated signal to a low frequency signal of the OAM modulated signal;

a OAM demodulator operable to demodulate the low frequency signal of the OAM modulated signal to a OAM demodulated signal; and

a PSK demodulator operable to demodulate the low frequency signal of the PSK modulated signal to a PSK demodulated signal.

## 18. A signal receiving method comprising:

receiving a signal with a receiver capable of receiving a PSK modulated signal processed by digital modulation and a OAM modulated signal processed by digital modulation, which are a satellite broadcasting signal and a cable television signal, respectively;

converting the PSK modulated signal to a low frequency signal of the PSK modulated signal with a mixer if the received signal is the PSK modulated signal, and demodulating the low frequency signal of the PSK modulated signal to a PSK demodulated signal; and

converting the OAM modulated signal to a low frequency signal of the OAM modulated signal with the mixer if the received signal is the OAM modulated signal, and demodulating the low frequency signal of the OAM modulated signal to a OAM demodulated signal;

wherein the mixer is capable of converting the PSK modulated signal to the low frequency signal of the PSK modulated signal, and converting the OAM modulated signal to the low frequency signal of the OAM modulated signal.